

of the clasper is prolonged as in the allied forms, the tip forming a distinct hook; the setæ are concentrated along the terminal margin, very stout and spatulate; the limb bearing the spine is bent down, its inner margin reversely fimbriate.

Types, No. 23928, U. S. Nat. Mus.; one male and four females, Lomagundi, November, 1909, one female, Lorenzo Marquez, Portuguese East Africa, November 7, 1909 (C. W. Howard).

These species, placed in *Ochlerotatus* by Edwards, are allied to *vexans* Meig., and with it fall in the subgenus *Ecculex* Felt. The type of *Ochlerotatus* being *confirmatus* L. A. (= *scapularis* Rond.), it is the same as *Heteronycha* as used by me.

NEW SPECIES OF HETEROCERA FROM SOUTH AMERICA

(*Lepidoptera*)

BY WILLIAM SCHAUS

Family PHALAENOIDIDÆ

Diamuna grandimacula, new species.

Male.—Palpi and head dark reddish brown. Collar and thorax chestnut brown, the patagia tipped with fuscous. Abdomen above fuscous brown, the anal segment fuscous gray; a dorsal chestnut brown tuft at base; abdomen below similar with long sublateral tufts. Fore tibiæ and base of tarsi with long dark brown and black tufts; mid and hind femora with orange brown hairs, the tibiæ brown and fuscous, the tarsi black. Fore wings dark purple tinged with brown; a fine black streak through cell to postmedial line; a triangular dark reddish brown velvety spot antemedially below cell, its base resting on median vein followed at cell by some pale reddish brown shading and a dark vertical streak; a fuscous streak at base of inner margin followed by lighter shading; a dull brown streak on costal margin; faint indications of an oval spot on costa, followed by some lilacine irrorations; post-medial line remote, brown black, outcurved from costa to vein 4, then

slightly incurved to inner margin, outwardly edged with cinnamon brown and closely followed by a subterminal dark reddish line interrupted from vein 4 to below vein 6; a reddish brown streak from subterminal to apex below costa; termen irrorated with lilacine; cilia brown. Hind wings black; a large yellow spot before termen, inbent narrowly along costal margin to base, its inner edge straight from upper angle of cell to vein 2 near termen, its outer edge rounded. Fore wings below black; a ridge of velvety black upturned hairs along inner margin, which is narrowly yellow; a post-medial orange spot from costa to vein 2, its inner edge straight, its outer edge rounded. Hind wings below black; the orange spot slightly narrower and only reaching a little beyond middle of costal margin.

Expanse, 48 mm.

Habitat.—Joinville, Southeast Brazil.

Type.—Cat. No. 23974, U. S. Nat. Mus.

Family SATURNIDÆ

Arsenura crenulata, new species.

Male.—Head and palpi fuscous brown, a white line on vertex between antennæ. Collar and thorax dark brown. Abdomen gray. Thorax below and legs fuscous gray, the tarsi whitish yellow with brown rings. Fore wings dull grayish brown; costal space to post-medial grayish, almost white on costal edge, post-medial line slightly darker than ground color, down-curved and inbent to inner margin at base; a pale spot on discocellular faintly edged with brown which extends to costa on proximal side; a triangular grayish brown shade on inner margin from near base to middle; subterminal line outangled below costa, then incurved and wavy to inner margin, grayish with a white streak on costa, points at veins and a triangular white spot above inner margin, followed by a gray shade, lunular on vein 6 edged by a white line, indentate on vein 7 and with a black point on costa. Hind wings dull grayish brown; a post-medial dark line; subterminal line pale marked by white points on veins from vein 5 to inner margin, followed by a narrow dark gray shade crossed by a fine line

formed of lilacine white irrorations, its outer edge lunular or dentate. Wings below lilacine gray on basal half, the outer half darker gray, with some dark striæ, the two shades separated by a pale brown, lunular dentate narrow shade; a subterminal wavy fine dark gray line edged with whitish scales, preceded by paired fuscous shades at veins, and followed by small reddish brown spots at veins; discocellular spots black, containing some ochreous scales, the spot on forewing small, the spot on hind wing a little larger and round.

Expanse, male 130 mm., female 140 mm.

Habitat.—Balzabamba, Ecuador.

Type.—Cat. No. 23975, U. S. Nat. Mus.

Very similar to *Arsenura arcaei* Druce; the hind wings crenulate as in *Arsenura batesi* Felder.

Received from Prof. Edward T. Owen.

Arsenura oweni, new species.

Male.—Head and palpi fuscous brown; a whitish shade around base of antennæ which are yellowish. Collar and thorax grayish brown, the former darker shaded in front. Abdomen above and below a little darker; lateral yellow points. Thorax below and legs fuscous brown. Fore wings light brown; costal margin to post-medial line and cell to ante-medial shade whitish thinly mottled with brown scales; ante-medial shade broad, dark brown but faint on costa, outangled below vein 2; post-medial line fuscous brown, faintly incurved, suffusing and followed by a broad dark chestnut brown shade widest toward costa; subterminal line fine, dark gray, outcurved below costa to vein 6, then diffuse, wavy, broader, below vein 2 straight and inbent to inner margin, preceded by a grayish brown shade, followed between veins 6 and 4 by small grayish lunules, and below 4 by a wavy line forming lunules between veins 4 and 2, below vein 2 parallel with post-medial marked with some small black spots and with a faint whitish shade between the two lines; some broad ochreous shading follows the lunules on interspaces; above vein 6 the post-medial is followed by a narrow light brown shade; a fine white streak and a gray shade edged by a fine white line,

deeply indentate on vein 7, starting from a small black spot on costa; a dark red line inbent from vein 7 to below vein 5; a long narrow brown spot on discocellular. Hind wings brown; costal margin whitish expanding to post-medial shade; a long vertical fuscous brown line from upper angle of cell to below lower angle; post-medial shade fuscous brown incurved from costa and almost straight to inner margin at subterminal line, followed by a broad dark grayish brown shade; subterminal line grayish brown nearly vertical to below vein 4, then inbent, wavy to inner margin, crossing a whitish shade and followed by a black lunular shade. Fore wings below lilacine gray irrorated with dark brown; cell and costa to above discocellular dark grayish brown; a fuscous line on discocellular; post-medial line fine fuscous brown; inner margin whitish; termen brown; black spots above tornus. Hind wings below lilacine gray thickly irrorated with brown; a dark brown streak on discocellular, post-medial line fine, fuscous brown; termen narrowly brown; a whitish marginal line marked by a black line between veins 6 and 7.

Expanse, male 140 mm., female 158 mm.

Habitat.—Balzabamba, Ecuador.

Type.—Cat. No. 23976, U. S. Nat. Mus.

***Automeris antioquia*, new species.**

Male.—Head and thorax cinnamon brown, the latter paler shaded behind. Abdomen above bright roseate at base; dorsal roseate tufts on basal half; terminal half grayish tinged with roseate. Body below yellow. Legs brown; tarsi dark brown. Fore wings reddish brown mottled with yellow; a white basal line; antemedial line deep yellow slightly outbent across cell, slightly inbent below cell to vein 5, outwardly edged in cell and just below it by some black scaling, with a white point on median, one close below it and a point on vein 1; a large dark brown shade on and beyond discocellular; its inner edge almost straight and defined by a fine yellow line, its outer edge lunular with three black points; a black point on its inner edge on median; outer line straight from costa near apex to

middle of inner margin, dark reddish brown inwardly finely edged with white expanding into points on veins; a broad reddish brown vertical shade from costa to outer line post-medially; some fuscous subterminal spots. Hind wings brilliant rose color, ocellus very large, the center steel gray broadly edged with black and then with a fine yellow brown and white line; the center of ocellus with black and white scaling surmounted by a curved white line, above it an angled brownish yellow line, below it a single line; a fine black, deeply lunular line below ocellus outwardly edged by a broad reddish brown shade; termen pale roseate, crossed by yellow veins; a terminal dark brown line; cilia deep yellow. Fore wings below yellow, the costal and outer margins irrorated with reddish brown; a very large black discal spot containing a white point; outer line more remote from apex, fine, fuscous wavy, interrupted by veins; base of inner margin reddish. Hind wings below yellow irrorated with reddish brown; a white point finely edged with black at lower angle of cell; a fine post-medial lunular wavy line; subterminal dark spots on interspaces.

Expanse, 97 mm.

Habitat.—Departamento de Antioquia, Colombia.

Type.—Cat. No. 23977, U. S. Nat. Mus.

Automeris curitiba, new species.

Male.—Head, collar and thorax dull grayish brown, the patagia outwardly with a tuft of luteous hairs. Abdomen above purplish red, underneath and anal hairs ochreous. Fore wings: base broadly and costal margin shaded with light ochreous brown, the termen light olive brown; discocellular spot very faint and linear; a straight line from apex to inner margin near middle, inwardly roseate white preceded by similar shading, outwardly olive brown slightly darker than terminal space. Hind wings: cell and inner margin broadly covered with purplish red hairs reaching the inner side of ocellus, which is otherwise surrounded by yellow; the ocellus broadly circled with black, its center dark brown crossed by a white line, and showing some white beneath the brown scaling;

a post-medial fine black line not reaching costa finely edged outwardly with yellow, then a subterminal purplish red shade; termen roseate gray. Fore wings below tinged with roseate to post-medial line which is fine, darker roseate, starting from costa near apex; a brown spot around discocellular crossed by a white line. Hind wings below pale ochreous white; a small white spot on discocellular edged with brown; a faint, roseate, straight post-medial line.

Expanse, 55 mm.

Habitat.—Curitiba, Brazil.

Type.—Cat. No. 23978, U. S. Nat. Mus.

Ormiscoodes caxambua, new species.

Male.—Palpi dull dark brown, with darker shading behind. Head dark reddish brown; a light brown tuft between antennæ; antennæ with the shaft brown, the pectinations fuscous. Collar and thorax dark brown. Abdomen above dark yellow with black segmental lines, underneath dark grayish brown. Thorax below and legs dark brown. Fore wings ochre white irrorated and suffused with dull grayish brown; the base broadly fuscous brown with short pale streaks at base of cell, also above and below vein 1, limited by a curved pale ante-medial shade outwardly edged by a dark line, deeply dentate on median vein and submedian fold, followed in cell by a fuscous streak; a black spot on discocellular; a pale post-medial shade outcurved and somewhat macular from costa to vein 5 preceded by dark shading and followed by a dark spot on costa; from vein 5 to inner margin the post-medial is dark, lunular, with inwardly projecting lines on veins, and is outwardly narrowly pale edged, followed from vein 3 to inner margin by a narrow dark shade, expanding to tornus; irregular dark shading on terminal space crossed by the paler veins; cilia dark with pale spots at veins. Hind wings pale thickly suffused with dark shading, darkest from cell to inner margin; a black spot on discocellular; an interrupted subterminal fuscous shade, a dark terminal line; cilia with a pale shade at base. Wings below suffused with fuscous gray; fore wings

with pale shading at base, on termen and post-medially; inner margin broadly clear pale yellow from base, but not reaching tornus; hind wings with a yellowish white post-medial shade, and some irregular similar marginal shading; the black discal spot as above.

Expanse, 53 mm.

Habitat.—Caxambu, Brazil.

Type.—Cat. No. 23979, U. S. Nat. Mus.

Dirphia zikani, new species.

Male.—Head brown, thorax brownish gray the hairs posteriorly tipped with whitish roseate. Abdomen above black with fine white segmental lines, downbent sublaterally; anal hairs red; abdomen below dark gray brown; legs brown, tarsi roseate. Fore wings grayish brown, the lines fuscous brown; antemedial line vertical from costa to median, then slightly inbent to inner margin, shaded on either side with white, more broadly so proximally; a black point on discocellular and a fine outbent line from it to vein 4, post-medial black slightly inbent from costa to middle of inner margin edged on its proximal side with white; a subterminal lunular whitish line outwardly shaded with dark gray, very indistinct from vein 4 to apex. Hind wings grayish brown; base of costal margin roseate; a fine dark line on discocellular; a dark post-medial line from costa to vein 4; cilia white on interspaces. Fore wings below pale roseate brown; a black streak on discocellular; a fine black post-medial line; traces of subterminal small spots. Hind wings below whitish mottled with roseate brown to near middle; a brown post-medial thick line crossing an angled black line on discocellular, followed by a less distinct brown shade; a subterminal brown shade broad and lunular between veins 2 and 4, and outwardly edged by a faint whitish line.

Expanse, 50 mm.

Habitat.—Passa Cuatro Minas, Brazil.

Type.—Cat. No. 23980, U. S. Nat. Mus.

Named after its discoverer.